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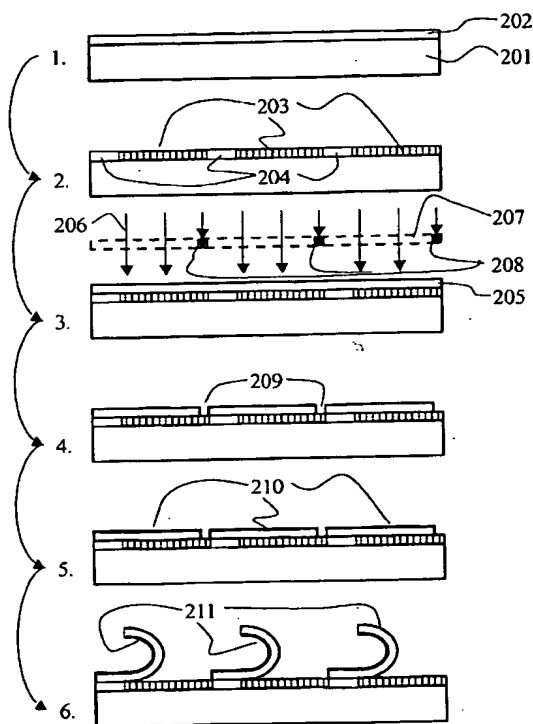
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(54) Title: MECHANICAL STRUCTURE INCLUDING A LAYER OF POLYMERISED LIQUID CRYSTAL AND METHOD OF MANUFACTURING SUCH



(57) Abstract: A mechanical structure comprises an element which is moveable by nonmechanical means, such as heat or radiation, between a first state having a first shape and a second state having a second shape different. To this end, the element includes a layer of oriented polymerized liquid crystal which exhibits an anisotropic expansion when subjected to such means. In order to facilitate manufacture the element is positioned on a substrate which has a region of high adhesiveness and a region of low adhesiveness for polymerized liquid crystal. To manufacture such structures a layer of oriented polymerizable liquid crystal is formed on a substrate (201) which is provided with a patterned surface that provides adhesive regions (204) with high adhesiveness to polymerized liquid crystal and nonadhesive regions (203) with low adhesiveness to polymerized liquid crystal. After polymerization, for example a thermal shock is applied which causes the layer of polymerized liquid crystal to delaminate at the non-adhering region while remaining fixed to the adhesive regions. Thus, the method does not require time-consuming under-etching steps.

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